REMARKS

Claims 28-48 are pending, and claims 1-27 have been canceled.

Claims 28-32, 34-39, 42-46 and 48 were rejected under 35 U.S.C. §103(a) as being unpatentable over Spencer, et al (US 6,047,230) in view of Schwaller (US 5,247,430) and admitted prior art. This basis for rejection is respectfully traversed.

Spencer, et al discloses an automatic bicycle transmission wherein a controller (21) receives power from a power supply (30) and information signals from various input components (e.g., 23-28 and 32-33). Controller (21) processes the signals from the various input components and determines when to provide signals to a shifter motor (29) that changes gears in the bicycle transmission. Controller (21) also provides signals to a display (31) that displays various information.

Schawaller discloses a bicycle lighting system wherein a switching controller ((1), Figs. 1 and 2) regulates the voltage from an alternating current generator (G) and provides the regulated voltage to lamps R_L and V_L. As shown in Fig. 2, switching controller (1) uses an oscillator (11) and an operational amplifier (4) to produce ON/OFF pulses having the variable duty-ratio shown in Fig. 3. An L-C circuit shown in Fig. 2 and described at column 3, lines 53-54 is used to convert the pulses into a direct current signal supplied to lamps R_L and V_L.

The applicant stated at page 1, paragraph [0003], lines 1-3 that technology for communicating power and control signals using integrated or composite signals has been developed to reduce the number of wires required between the various electrical components.

The office action states that it would have been obvious to one of ordinary skill in the art at the time of the invention to use Schwaller's headlights and power stabilizing system to allow the bicycle to be used at night and to supply the correct amount of power to the headlights. The office action further states that it would have been obvious to one of ordinary skill in the art at the time of the invention to use composite signals throughout the bicycle system to reduce the number of wires used around the bicycle.

Claim 28 recites, *inter alia*, a programmed power/control circuit that outputs a composite signal having a power signal component and a control signal component, wherein the control signal component contains information such that the composite signal can be decoded to extract the information contained in the control signal component; a first electrical bicycle component that receives the composite signal and is controlled by the information contained in the control signal component of the composite signal; and a second electrical bicycle component that receives the composite signal but is not controlled by the control signal component of the composite signal. As an initial matter, Schwaller neither discloses nor suggests a composite signal that can be decoded to extract information contained in a control signal component of the composite signal. The pulses shown in Fig. 3 cannot be interpreted to be a control signal component because the pulses are destroyed by the L-C filter, and it is only the DC voltage from the capacitor in the L-C filter that is applied to the inverting input terminal of operational amplifier (4). Switching controller (1) neither receives nor outputs composite signals, so Schwaller neither discloses nor suggests a second electrical bicycle component that receives a composite signal but is not controlled by the control signal component of the composite signal.

Insofar as it is alleged that it would be obvious to supply composite signals to Schwaller's lighting system as applied to Spencer's bicycle to reduce the number of wires used around the bicycle, such a reduction occurs only with components that use both power and control signals. Conventionally, such components require at least two wires: one wire for the power signal and one or more wires for the control signal. Using a composite signal allows such components to be powered and controlled using a single wire. However, components that do not use control signals need only one wire to begin with - a power wire. Lamps do not use control signals. Thus, there is no reason to power lamps V_L, R_L with a composite signal to save wires because there are no wires to be saved in such an application. The stated benefit simply would not occur. Thus, the prior art neither discloses nor suggests the subject matter recited in at least claim 28.

As for claim 39, the prior art neither discloses nor suggests the control signal component of a *composite* signal (from claim 28) comprising a speed indicating signal.

As for claim 48, the office action states that Spencer, et al's gear shift driving component (29) (first electrical bicycle component) comprises a CPU, but that is not the case. The only CPU resides in controller (21). Thus, Spencer, et al neither discloses nor suggests a first electrical bicycle component comprising a CPU that receives a composite signal and is controlled by the control signal component of the composite signal.

Claims 33 and 47 were rejected under 35 U.S.C. §103(a) as being unpatentable over Spencer, et al, Schwaller and admitted prior art in view of and Gohda (US 4,609,982). This basis for rejection is respectfully traversed for the reasons noted above.

Claim 40 was rejected under 35 U.S.C. §103(a) as being unpatentable over Spencer, et al, Schwaller and admitted prior art in view of and Tomita (JP 07-229,909). This basis for rejection is respectfully traversed for the reasons noted above.

Claim 41 was rejected under 35 U.S.C. §103(a) as being unpatentable over Spencer, at al, Schwaller and admitted prior art in view of Turner (US 2002/0014366). This basis for rejection is respectfully traversed for the reasons noted above.

Furthermore, claim 41 does not merely recite the generic addition of an LCD/backlight display to a bicycle. Claim 41 recites a first electrical bicycle component that comprises a liquid crystal display component structured to display various data, wherein the second electrical bicycle component comprises a backlight that illuminates the liquid crystal display component. That is a specific structure to which the composite signal recited in claim 28 is applied. The prior art neither discloses nor suggests the application of a composite signal to a liquid crystal display component and to a backlight that illuminates the liquid crystal display component, wherein a power stabilizing circuit stabilizes power to the backlight.

Accordingly, it is believed that the rejections under 35 U.S.C. §103 have been overcome by the foregoing remarks, and it is submitted that the claims are in condition for allowance. Reconsideration of this application is respectfully requested. Allowance of all claims is earnestly solicited.

Respectfully submitted,

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